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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,656	08/25/2003	Walter K. Lim	57239	3911
7590 05/28/2004 Dennis H. Lambert & Associates 7000 View Park Drive Burke, VA 22015			EXAMINER PRICE, CARL D	
			ART UNIT	PAPER NUMBER
			3749	

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/648,656	LIM ET AL.	
	Examiner	Art Unit	
	CARL D. PRICE	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 6,9-17 and 19-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of the embodiment of species 2, Group 1 (i.e. - the finger pump, claims 1-5, 7, 8 and 18) in Paper No. 05112004 is acknowledged.

Claims 6,9-17 and 19-24 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 05112004.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." References made by applicant to U.S. Patent No. 6,267,581, on page 1; and other information such as a "mechanical break up nozzle to produce a full spray" (Precision Valve Corp.), on page 3, lines 6-11 and the "conventional sprayers" (Precision Valve Corp.), page 3, line 28. Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections

35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 7, 8 and 18: rejected under 35 U.S.C. 102(b)/35 U.S.C. 103(a)

Claims 1-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being obvious over Harrison (US006267581B1) in view of Yen (US006510901B2) and further in view of Goeren et al (US005829648A).

Harrison discloses the invention substantially as set forth in applicants' claims with possible exception to the Harrison shows (Figure 2) and discloses (column 3, lines 6-19) a hand held finger and pump operated device for extinguishing a candle flame by dispensing, under pressure, a filled conical spray (B; see column 3, lines) of an aerosol water mist about the flame of a candle to be extinguished. Harrison also recognizes that "countless varieties of hand pumps are available for use in practice of the invention". Harrison discloses the invention substantially as set forth in applicants' claims with possible exception to:

- 1) Regarding claims 1 and 5, the size of water droplets and the spray distribution (i.e. - a steep bell curve and a filled conical spray),
- 2) Regarding claims 2-4, the quantity of water discharged in each cycle (i.e. - 1.0 ml, 0.05 ml, 0.08 ml),
- 3) the pump being of the "finger pump" type (claim 7),
- 4) a 0.12 inch mechanical break up insert to form the desired droplets size (claim 18).

Yen teaches (see column 3, lines 48-60; column 4, lines 7-16 and 29-35), from the same open flame extinguishing field of endeavor as Harrison, water mist sprays having droplet with cross-sections between 400 and 1000 microns are known to produce "best flame suppression action and results". Yen further acknowledges that these water mist droplets "have a very great total surface area, acting to rapidly lower temperature in the flame area and fat zone.". Yen also recognizes that "the optimum parameters of the extinguisher required of extinguishing various

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types of fires, including water mist characteristics (spray angle, water droplet sizes and flow rates), discharge pressures, nozzle discharge angles, and the type of nozzles, have been determined.” (see columns 5-8).

In regard to claims 1-5, 7, 8 and 18, in view of the teaching of Yen, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the water mist to produce water droplets sized less 1000 microns. Additionally, in view of Yen's recognition that optimum parameters of the extinguisher required of extinguishing various types of fires can be determined by the person having ordinary skill in the art, to distribute the spray over a step bell curve, discharge water in each cycle in the amount of 1.0 ml, 0.05 ml or 0.08 ml; dimension and select nozzle elements (i.e.- properly sized mechanical breaks) can be viewed as nothing more than mere matters of choice in design associated with a given use, or application, of a device such as that of Harrison. Also, in regard to claim 1-5, 7, 8 and 18, for the purpose of sufficiently dispersing the mist so as to not overly wet the surface being treated, it would have been obvious to a person having ordinary skill in the art, to modify the water misting device of Harrison, to produce a filled conical spray (i. e. – “a blossom of spray”), in view of the teaching of Goeren et al (see column 2, lines 10-24).

Conclusion

See the attached PTO FORM 892 for prior art made of record and not relied upon and which are considered pertinent to applicant's disclosure.

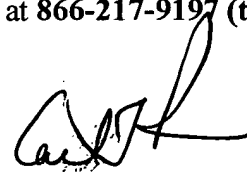
Roth (DE10061667) discloses (see the English language abstract) a candle snuffer gun for directing one or two shots of a strong short fine spray of water mist onto the candle, to completely extinguish the flame and also the wick.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **CARL D. PRICE** whose telephone number is **703-308-1953**. The examiner can normally be reached on Monday through Friday between **6:30am-3:00pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on **703-308-1935**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197** (toll-free).



CARL D. PRICE
Primary Examiner
Art Unit 3749